

Claims

1. A video conferencing system comprising a main unit, the main unit including a device interface, a camera adapter, a docking station adapter, a processor, and a memory,

the device interface including one or more ports, each of the one or more ports adapted to provide an output to a device or receive an input from a device;

the processor and the memory configured to perform video conferencing functions;

the camera adapter configured to removably receive a camera unit that provides audio and video signals to the main unit through the camera adapter, the processor of the main unit programmed to process the audio signals and, in response to the audio signals, to generate control signals to control at least one of the direction or zoom of the camera unit; and

the docking station adapter configured to removably couple to a docking station that connects the main unit in a communicating relationship with a video conferencing network.

2. The system of claim 1 wherein the device interface provides a connection to one or more video conferencing peripherals.

3. The system of claim 1 further comprising a camera unit removably electrically and mechanically connected to the main unit and connected in a communicating relationship with the main unit through the camera adapter, the camera unit including a plurality of microphones that provide the audio signals to the main unit and a camera that

provides the video signals to the main unit, the camera including at least one of a controllable direction or a controllable zoom responsive to the control signals generated by the main unit.

4. The system of claim 1 further comprising a docking station, the docking station removably electrically and mechanically connected to the main unit and connected in a communicating relationship with the main unit through the docking station adapter, the docking station including a network port for connecting the docking station in a communicating relationship with a video conferencing network and circuitry for converting video conferencing network data between a first format compatible with the video conferencing network and a second format compatible with the docking station adapter.

5. The system of claim 1 wherein at least one of the docking station or the camera unit receive power from the main unit.

6. The system of claim 1 wherein the main unit further comprises a mass storage device that stores a program implementing one or more video conferencing protocols.

7. The system of claim 2 wherein the one or more video conferencing peripherals include at least one of a speaker, a microphone, a video monitor, a camera, or a projector.

8. The system of claim 1 wherein the video conferencing functions include coding and decoding audio data and coding and decoding video data.
9. The system of claim 1 wherein the video conferencing functions include providing a user interface to a user of the system.
10. The system of claim 3 wherein the plurality of microphones have predetermined locations relative to the camera, the processor of the main unit calculating a location of an audio source relative to the camera using the predetermined locations of the plurality of microphones and an audio signal received from each of the plurality of microphones, and the processor responsively generating control signals to the camera to steer the camera to the location of the audio source.
11. The system of claim 3 wherein the controllable direction includes a controllable pan and a controllable tilt.
12. The system of claim 4 wherein the docking station includes at least one of a Peripheral Component Interface card, a Multi-Vendor Integrated Protocol card, or a Peripheral Component Interface/Multi-Vendor Integrated Protocol card.
13. The system of claim 4 wherein the network port includes at least one of a data network port or a telecommunications network port.

14. The system of claim 4 wherein the network port includes at least one of a Digital Subscriber Line port, an Integrated Services Digital Network port, a T1 line port, an E1 line port, a V.35 port, a Wireless Local Area Network port, or a Fiber Distributed Data Interface port.

15. The system of claim 1 further comprising one or more media processors that support processing of audio or video data in a video conference.

16. A docking station consisting essentially of:

a first adapter configured to mechanically and electrically connect to a video conferencing unit;

a second adapter configured to be connected in a communicating relationship with a network;

circuitry within the docking station and receiving power from the first adapter to receive first signals from the first adapter, convert the first signals into a form suitable for the network, and output the converted signals on the second adapter, and circuitry housed within the docking station and receiving power from the first adapter to receive second signals from the second adapter, convert the second signals into a form suitable for the video conferencing unit; and

a housing, the housing substantially enclosing the first adapter except where the first adapter is exposed to connect to the video conferencing unit, the housing substantially enclosing the second adapter except where the second adapter is exposed to connect to the network, and the housing substantially enclosing the circuitry.

17. A docking station comprising a first adapter, a second adapter, circuitry, and a housing wherein:

the first adapter is configured to mechanically and electrically connect to a video conferencing unit;

the second adapter is configured to be connected in a communicating relationship with a network;

the circuitry is within the housing and the circuitry receives power from at least one of the first adapter and the second adapter, the circuitry configured to receive first signals from the first adapter, convert the first signals into a form suitable for the network, and output the converted signals on the second adapter, and the circuitry configured to receive second signals from the second adapter, convert the second signals into a form suitable for the video conferencing unit; and

the housing substantially enclosing the first adapter except where the first adapter is exposed to connect to the video conferencing unit, the housing substantially enclosing the second adapter except where the second adapter is exposed to connect to the network, and the housing substantially enclosing the circuitry, the housing configured to support the video conferencing unit when connected thereto.

18. A docking station including a video conferencing unit adapter and a network port, the docking station housing a computer card, the computer card being at least one of a Multi-Vendor Integration Protocol card, a Peripheral Component Interface card, or a Multi-Vendor Integration Protocol/Peripheral Component Interface card, a bus connector

of the computer card coupled to the video conferencing unit adapter for connecting in a communicating relationship with a bus of a video conferencing unit, and a network interface of the computer card coupled to the network port for connecting in a communicating relationship with a network, the computer card adapted to maintain communication between the video conferencing unit adapter and the network port.

19. A camera unit comprising:

an adapter that is removably electrically and mechanically attachable to a video conferencing system;

a camera, the camera responsive to control signals received through the adapter to change at least one of a pan, a tilt, or a zoom of the camera;

a plurality of microphones having predetermined locations relative to the camera, the plurality of microphones providing audio signals to the adapter, whereby the audio signals may be received through the adapter from the camera unit, processed externally to the camera unit to determine a location of a source of the audio signals, and suitable control signals provided through the adapter to the camera unit to steer the camera toward the location of the source of the audio signals.

20. A docking station comprising:

first adapter means for mechanically and electrically connecting to a video conferencing unit;

second adapter means for connecting in a communicating relationship with a network;

circuitry means for connecting the first adapter means and the second adapter means in a communicating relationship; and

housing means for substantially enclosing the first adapter means, the second adapter means, and the circuitry means, except where the first adapter means is exposed to connect to the video conferencing unit, and where the second adapter means is exposed to connect to the network.

21. A docking station comprising a first adapter, a second adapter, circuitry, and a housing wherein:

the first adapter is configured to be connected in a communicating relationship with an external medium;

the second adapter is configured to mechanically and electrically connect to a video conferencing unit;

the circuitry is within the housing and the circuitry receives power from at least one of the first adapter and the second adapter, the circuitry configured to receive first signals from the first adapter, convert the first signals into a form suitable for the video conferencing unit, and output the converted signals on the second adapter;

the housing substantially enclosing the first adapter except where the first adapter is exposed to connect to the video conferencing unit, the housing substantially enclosing the second adapter except where the second adapter is exposed to connect to the network, and the housing substantially enclosing the circuitry, the housing configured to support the video conferencing unit when connected thereto.

22. The docking station of claim 21, the circuitry configured to receive second signals from the second adapter and convert the second signals into a form suitable for the external medium.

23. The docking station of claim 21 wherein the external medium comprises at least one of a mass storage device, a CD ROM, or a DVD player.

24. A video conferencing system comprising a main unit, the main unit including a device interface, a docking station adapter, a processor, and a memory,

the device interface including one or more ports, each of the one or more ports adapted to provide an output to a device or receive an input from a device;

the processor and the memory configured to perform video conferencing functions; and

the docking station adapter configured to removably couple to a docking station that connects the main unit in a communicating relationship with a video conferencing network.

25. The system of claim 1 wherein one of the one or more ports is connected to a camera.